

of the abdomen; first scapal segment fulvous; second segment fulvous; remainder of the organ dark brown. Head fulvous.

Mesonotal præscutum and scutum liver-brown, margined sublaterally with black, the extreme lateral margins pale; scutellum greenish testaceous medially; postnotum with the median sclerite dull fulvous, margined with dark brown. Pleura yellowish, marked longitudinally with dark brown, this colour extending across the dorsal margin of the lateral sclerite of the postnotum. Mesosternum dark brown, yellowish medially. Halteres dark brown, the extreme base paler. Legs with the coxæ dark brown on the outer face, the apices yellow; trochanters yellow; remainder of legs brown; femoral tips broadly brownish black; claws of male toothed. Wings with a pale grey tinge, the costal cell brown, the subcostal cell and stigma dark brown; a faint brown seam along  $r-m$  and the deflection of  $R_{4+5}$ . Venation:  $R_s$  shorter than  $R_{2+3}$ ; petiole of cell  $M_1$  shorter than  $m$ .

Abdomen brownish testaceous, the caudal margins of the segments narrowly infuscated; segments 6 to 8 dark brownish black; hypopygium reddish yellow, with greenish tints. Male hypopygium with the sclerites fused into a ring. Ninth tergite with the elongate median lobe narrow, depressed, the caudal margin with a U-shaped notch, the adjacent lobes slightly divergent, unarmed.

*Hab.* Cameroun.

*Holotype*, ♂, Elat, 1920 (*J. A. Reis*).

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XVI.—Notes on the Asilinæ of the South African and Oriental Regions. By GERTRUDE RICARDO.

*Promachus beelsoni*, ♂ ♀, sp. n.

Type (male) and four other males, type (female) and one other female, all from Mohnyin River, Katha, Burmah (*C. F. C. Beeson*), caught between May 15th and 25th in 1918. In the Forest Research Zool. Coll. some of the specimens have the appearance of only just having emerged from the pupæ.

A large blackish species with long yellow hairs on the legs, which are chiefly black. Moustache, beard, and hairs of palpi yellow. Genitalia large, black-haired; ovipositor

short. Abdomen with yellowish hairs on sides of basal segments.

Length, ♂ 32, ♀ 26 mm.—these latter are immature.

*Male*.—*Face* black covered with glistening yellow tomentum, tubercle large with a moustache of yellow bristly hairs and yellow bristles; these extend as yellow hairs to the base of antennæ. Beard yellow. *Palpi* with long yellow hairs. *Antennæ* blackish, the first two joints with yellow hairs on lower sides and some black ones above. *Forehead* with black and yellow bristly hairs on sides and with two or more weak yellow hairs on the ocelligerous tubercle. Hind part of head with black bristles, some yellow ones in the centre, continued round to the oral opening. *Thorax* black with some greyish tomentum and the usual stripes. *Scutellum* covered with weak yellow hairs or bristles and with long black bristles on the posterior part, but not bordering the edge, which is armed chiefly with the weak yellow or white bristles, though some of the specimens have some black bristles. *Abdomen* with the usual dark spots, appearing blackish with grey tomentose segmentations; the first four segments with yellowish hairs, thickest at the sides, in some of the specimens they are white, the remaining segments with short yellow recumbent pubescence and white hairs at the sides; underside with long pale yellowish or white hairs. *Genitalia* black, the upper forceps club-shaped with a segment-like base about half as wide as the last segment, furnished with a thick fringe of black hairs below, the lower forceps small, all with long black hairs. *Legs* blackish, the yellow hairs longest on the underside of the fore and middle femora and tibiæ; the fore femora with no bristles below; the tibiæ with appressed reddish pubescence on their inner sides; tarsi with black bristles, some yellow ones on the hind tibiæ; short yellow pubescence is apparent on the tibiæ and the first tarsal joints. *Wings* large, greyish, with a deeper grey tinge in the middle of the first submarginal cell, the small transverse vein below the middle of the discal cell.

*Female* identical. *Moustache* with black and yellow bristles. *Palpi* with black bristles, the hairs above yellow and then black at base of antennæ, the basal joints of which are clothed with chiefly black hairs. *Scutellum* with black bristles on dorsum and at edge. *Abdomen* with more grey than yellow hairs. Ovipositor short, but the abdomen is crumpled, so that it is difficult to ascertain if the last two segments are usually compressed, before the ovipositor proper. The yellow hairs on the legs do not appear to be so thick, all bristles are black.

*Promachus pallidus*, ♂ ♀, sp. n.

Type (male) and two others, type (female) and three others, all from the same locality and by the same collector as *Promachus beelsoni*; none of them are very perfect, but appear immature—however, they are very distinct from the last-named species.

A light-coloured species with yellowish legs, the abdomen yellowish with brown spots.

Length, ♂ 23–24, ♀ 22–23 mm.

*Male*.—*Face* yellowish brown covered with yellowish and white glistening tomentum. *Moustache* of yellow bristles, sometimes a few black ones intermixed. *Palpi* yellowish and yellow-haired, some black hairs on the inner sides. *Antennæ* yellowish, the last two joints brownish, the first joint with black and yellow hairs, the hairs between them and the moustache are short and pale yellow. Hind part of head with chiefly black bristles in the centre and whitish hairs beyond. *Thorax* yellowish brown with two distinct darker median stripes; the whole dorsum clothed with short black bristles, with the usual long black bristles on the posterior part. *Scutellum* with weak white hairs and strong black bristles on dorsum and at edge, though white ones appear on the edge only in some specimens. *Abdomen* same colour as thorax and scutellum; the usual large spots are brownish and the segmentations yellowish; the pubescence of weak white hairs thickest on the basal segments and at their sides. *Genitalia* rather small, same colour as abdomen; the upper forceps stout, rather truncate at tips, the under pair stout, short, all with long black bristly hairs above and below. *Legs* pale chamois-leather colour; the knees black; femora and tibiæ with weak long white hairs, thickest on the first two pairs, the fore femora unarmed, all bristles black; pubescence on legs white. *Wings* clear, with one grey streak on the first submarginal cell, the small transverse vein at the middle of dorsal cell.

*Female* identical. *Palpi* darker, with chiefly black hairs. *Scutellum* with two rows of chiefly black bristles and short white hairs. *Legs* with not so many long hairs. *Ovipositor* short.

#### PHILODICUS, Loew.

Linn. Ent. iii. p. 391 (1848).

Distinguished from *Alcimus* by the shorter submarginal cell. Loew also divides it from this last genus by the much

*Ann. & Mag. N. Hist. Ser. 3. Vol. viii. 12*

flatter ocelligerous tubercle, and the middle and side stripes of thorax are pubescent. The species are usually darker-coloured, and not so large as a rule, and the thorax is not so distinctly striped; but the division of these two genera appears based on rather unsatisfactory characters. *Alcimus ponticus* is now removed to this genus.

The genus is confined to the Oriental and South African Regions, with the exception of *Philodicus spectabilis*, Loew, from Turkestan, *Philodicus bimaculatus*, Becker, from Persia, and *Philodicus cunescens*, Wlk., from Australia, and the above *Alcimus ponticus*, from Persia.

*Table of Species of Philodicus from South African Region.*

1. Large species resembling an *Alcimus* species.  
   Legs reddish with pale short pubescence . . . . . *dubius*, ♂ ♀, sp. n.  
   Smaller species not resembling an *Alcimus* species . . . . . 2.
2. Slender species. Femora and tibiæ almost entirely rufous . . . . . *gracilis*, v. d. Wulp.  
   Small species. Femora blackish with black bristles below on all. Tibiæ pale at extreme base only . . . . . *temerarius*, ♂ ♀, Wlk.  
   Robust species. Femora black with black bristles below. Tibiæ dull red on outer sides . . . . . *walkeri*, ♀, sp. n.
3. Femora not entirely black . . . . . 4.
4. Fore femora armed below with some bristles. . . . . 5.  
   Fore femora with no bristles below . . . . . 6.
5. Fore femora with short white bristles below.  
   Small slender species. Bristles on legs black and white. Femora and tibiæ reddish below . . . . . *fraterculus*, ♀, Wlk.  
   Fore femora with pale or black bristles and long white hairs below. Tibiæ reddish. Bristles on legs chiefly black . . . . . *turinus*, ♂ ♀, Wlk.  
   Fore femora in male with one black bristle near the base and soft white hairs below; female with two black and three yellow bristles. Femora and tibiæ reddish. Hind legs entirely black. Bristles on legs chiefly black . . . . . *nigrescens*, ♂ ♀, sp. n.
6. Fore femora below with white bristly hairs near base and soft white hairs. Femora and tibiæ reddish below . . . . . *fraternus*, ♂ ♀, Wied.  
   Fore femora below with only long white hairs, femora and tibiæ reddish on outside. Shading of wing confined to apex. . . . . *umbripennis*, ♂ ♀, sp. n.

*Philodicus pavesii*, Bezzi, from Somaliland, described as black with white tomentum, white bristles, and moustache and tibiæ testaceous, is unknown to me, as is *Philodicus blandus*, Wied., from unknown locality.

*Philodicus dubius*, ♂ ♀, sp. n.

Type (male) and another, type (female), all from M'Fongosi, Zululand (*W. E. Jones*), March 1911, in Cape Museum Coll.

A large species, in general appearance resembling an *Alcimus* species with a long body and short wings; the bristles on the legs are chiefly white.

Length, ♂ type 32, ♀ type 32 mm.

*Male*.—*Face* reddish with yellow tomentum. *Moustache* composed of yellow bristles and some finer white hairs, one black bristle near oral opening. *Palpi* with white hairs. Beard white. *Forehead* same colour as face with some yellow bristly hairs; soft white hairs below the *antennæ*, which are reddish with black hairs, the third black and bare. Hind part of head with reddish-yellow bristles. *Thorax* with the usual stripes, with black pubescence and longer fine white hairs posteriorly between the stout black bristles. *Scutellum* with two black bristles and short white hairs. *Abdomen* long and slender with the usual dark spots and pale segmentations; pubescence largely white, black on the middle of the dark spots; sides with yellow bristles. *Genitalia* reddish with thick, short, yellow pubescence. *Legs* reddish, femora blackish below, and hind tibiæ largely black; pubescence on legs thick short and pale-coloured; bristles chiefly white, black on the tarsi. *Wings* shorter than body, the shading in apex faint; veins brown.

*Female* identical; the bristles on scutellum are red. Fore femora have yellow bristles below, instead of fine hairs as in the male, and the yellow bristles predominate on the legs. *Ovipositor* short, reddish.

*Philodicus gracilis*, v. d. Wulp.

Trans. Ent. Soc. London, 1899, p. 92, pl. iii, fig. 5 (1899).

One female from Arabia (*Percival and Dodson*), 1900, 36.

This specimen answers in all particulars to the description, with the small exception of the palpi, which are black, not rufous, and some of the bristles on the tarsi are white.

*Philodicus temerarius*, ♂ ♀, Walker.

Dipt. Ins. Saund. i. p. 121 (1851); et List Dipt. vii., Suppl. 3, p. 596 (1855) [*Tripanea*]; Loew, Dipt. Süd-Afrik. i. p. 127 (1860) [*Promachus*].

[*Philodicus obscuripes*, Loew, Dipt. Süd-Afrik. i. p. 139 (1866).]

Type (female) from Senegal (*W. W. Saunders*), other

specimens from Ashanti, Duala in Cameroons, Sierra Leone, Liberia, and S. Nigeria, in I. E. E. Coll. from Kumasi, Ashanti; Nyasaland, Ibadan in S. Nigeria, and Gold Coast.

A small black species; the tibiæ paler at the extreme base only, the bristles on legs black. In the female the fore femora have two or three short black bristles below and soft white hairs. In the male there are usually two long black bristly hairs and yellow hairs.

Length, ♂ 15, ♀ 15–20 mm.

A series of males and females from Pretoria (*Miss J. Brincker*) differ slightly, the males having no black bristly hairs on fore femora below, in the female there are some black and white bristles; the tibiæ and tarsi on their outer sides have white bristles, and the tarsi some on the inside, the hind femora with them above and below. Moustache is white, but there are black bristles above towards the base of the antennæ; they are slightly larger, measuring in the males  $17\frac{1}{2}$ –21 mm., in the females 18 mm.

*Philodicus walkeri*, ♀, Ricardo.

[*Asilus turinus*, ♀, Walker, List Dipt. ii. p. 407 (1849), in parte.]

Type (female) from Sierra Leone (presented by Rev. F. D. Morgan), other females from Bugama, Nigeria (*Dr. Annott*), and Sierra Leone (Walker Coll.).

This specimen placed with *Philodicus turinus* male type as the female type evidently is not the same species, though very nearly allied, the *legs* being more largely black with all black bristles; the tibiæ are dull rufous on their outer sides, black at the apices; the femora are wholly dark-coloured, all armed with black bristles; the pubescence on legs greyish, the oral opening with three or more black bristles.

The absence of the long yellow bristles on the fore tibiæ and fore tarsi distinguishes it at once from *Philodicus turinus*. Walker's description of this latter is more than usually inaccurate, no mention being made of these bristles in the male type, and the assertion that the wings in the female are longer than the body is incorrect.

Length 23–27 mm.

*Philodicus fraterculus*, ♀, Walker.

List Dipt. vii., Suppl. 3, p. 597 [*Trupanea*] (1855).

One female (type) from Port Natal.

One male from Junction Blaauw Krantz and Tugela

River, Natal, Oct. 1896 (*G. A. K. Marshall*), is probably the male of this species.

A small species, measuring 18 mm.

*Female*.—*Antennæ* blackish with black hairs. *Moustache* yellow. *Forehead* with black and yellow bristles on each side. Hind part of head with white hairs below the stout black bristles. *Thorax* yellowish brown with two narrow median stripes and the usual side-stripes. *Scutellum* with two black bristles. *Abdomen* blackish covered with whitish tomentum, the usual spots are present; pubescence on dorsum rather abundant, white, very short. *Ovipositor* black, long; bristles at sides white, only present apparently on the first two segments, but the type is in poor condition. *Legs* blackish, femora reddish below and on outer sides, tibiæ the same, tarsi reddish; pubescence on legs thick, white, the bristles are black and white, those on the fore femora or underside white, many white ones on tibiæ and tarsi. *Wings* shorter than abdomen, the usual shading at apex. The male mentioned above is probably this species, the *genitalia* stout reddish with yellow short pubescence; abdomen is more reddish.

Loew's species, *Philodicus tenuipes*, might possibly be identical with this species, but he speaks of the colour of the insect as yellowish with white tomentum; his specimen came from Kaffraria.

*Philodicus turinus*, ♂, Walker.

List Dipt. ii. p. 407 [*Asilus*] (1849); et vii., Suppl. 3, p. 597 [*Asilus*] (1855); Loew, Dipt. Süd-Afrik. i. p. 127 (1860) [*Promachus*].

Type (male) from Sierra Leone (presented by Rev. D. F. Morgan).

Males and females from Yaba, Gold Coast; Lagos; N. and S. Nigeria; and British E. Africa; in I. E. E. Coll. from N. Territories, Gold Coast; and Nyasaland (*J. T. Simpson* and others).

The type is in bad condition and the fore femora are more reddish than black below, whereas in the other specimens the fore femora are chiefly black; in other respects these specimens agree with the type. The species is distinguished by the yellow or reddish long bristles on the fore tibiæ and tarsi; the fore femora are armed with some bristles on the under surface.

Length, ♂ 21-26, ♀ 23-27 mm.

*Male*.—*Face* blackish, covered with greyish tomentum, yellow at the sides. *Moustache* composed of long yellow

bristles, with occasionally a black one intermixed, and at sides of oral opening there are one or two stout black bristles in some of the specimens; in the type they are all yellow. *Palpi* blackish with yellow hairs. Beard white. A few yellow hairs are continued from the moustache to the base of antennæ, which last are dark with black hairs on the first two joints. *Forehead* with black bristles at sides. *Thorax* blackish covered with grey tomentum, the median stripe divided and the side-stripes appearing as four black spots; pubescence on dorsum black, with strong black bristles posteriorly. *Scutellum* with two black bristles. *Abdomen* with the usual dark spots and greyish segmentations; pubescence black and yellowish, bristles at sides of segments yellow; underside uniformly light in colour. *Genitalia* black with grey pubescence, reddish on the underside. *Legs* black, the tibiæ reddish, only black at the extreme apex; in some specimens the inner sides are blackish and the hind pair are almost always largely black, the bristles on fore femora below are red or yellow in the type, often black in the other specimens; pubescence of legs greyish and yellow, the yellow bristles on fore tibiæ are long, usually three or four in number, and are continued on the tarsi often on each side, on the tibiæ they are on the outer edge, bristles elsewhere chiefly black, with the exception of those on the hind femora. *Wings* with grey shading on the apex, very distinct.

*Female* identical. *Ovipositor* black, shining, with the usual terminal spines. In some specimens the yellow bristles on fore femora are reduced to one.

*Philodicus nigrescens*, ♂ ♀, sp. n.

Type (male) and others, type (female) and others, all from Lualaba River, Congo, 2500–4000 feet (Neave Coll.).

A blackish fair-sized species. Legs blackish, the femora and tibiæ of the anterior legs reddish, fore tibiæ and tarsi with some long yellow bristles. Fore femora on male with soft white hairs and one black bristle near the base; female with two black ones and three yellow ones.

Length, ♂ 20–24, ♀ 20–23 mm.

*Male*.—*Face* brown with yellowish-grey tomentum, chiefly at sides. *Moustache* composed of long yellow bristles and two long black ones on each side. *Palpi* with white hairs. *Antennæ* broken off, the first two joints black with black bristly hairs, a few yellow hairs on face below. *Forehead* with black bristles at sides. *Thorax* brownish with grey



tomentum, yellower at the sides, the brown median stripe is divided into two narrow ones, side-stripes composed of blackish spots as usual, three in number; pubescence on dorsum black, a few white hairs near the black bristles at posterior border. *Scutellum* the same as thorax with two black bristles. *Abdomen* dusky-looking, with the usual brown spots, the grey segmentations narrow, bristles at sides yellow. *Legs* blackish, the hind legs entirely so; femora and tibiæ elsewhere reddish below and on outer sides; tarsi blackish; pubescence on legs whitish and thick, bristles almost entirely black, with the exception of the two or more long yellow bristles on the fore tibiæ and those on the fore tarsi. *Wings* tinged yellow, the shading on apex prolonged on posterior border to fourth posterior cell.

*Female* identical, only one long yellow bristle on fore tibiæ.

*Philodicus fraternus*, Wied.

Zool. Mag. i. p. 3 [*Asilus*] (1819) etc.; Bigot in Thoms. Archiv. Ent. ii. p. 355 [*Philodicus*] (1858); Schiner, Verh. zool.-bot. Ges. Wien, xvi. p. 689 (1866), et xvii. p. 390 [*Alcimus*] (1867).

In spite of Schiner stating that the above is an *Alcimus* species—he having seen the type,—it appears from what Wiedemann says in his description that it undoubtedly belongs to this genus, as he remarks that the small transverse vein very near the base of the fork of the third vein is not so near as in *Alcimus hospes*, which latter is also, I believe, a species of this genus.

It appears to be a common species on the West Coast of Africa, judging from the series of specimens in the Brit. Mus. and I. E. E. Colls. ranging from Sierra Leone to Nigeria; Gambia; Yapi, Soro River, N. Territories, Gold Coast; and Cotonen in Dahomey 70 miles west of Lagos. One female from Chinde, Mozambique, in South African Museum Coll. (*K. H. Barnard*).

A blackish species with black legs; the femora red on the under sides and outer sides, and the tibiæ the same; tarsi reddish with black apices. Wiedemann makes no mention of the colour of the bristles on the legs; they are usually all black on the hind legs, with some white bristles on the others intermixed with the black ones. The fore tibiæ and tarsi have long yellow or reddish bristles as in *Philodicus turinus*, in the female they are often more largely white in colour; the fore femora on the underside usually with one or more white bristly hairs near the base and fine white hairs.

Length, ♂ 19-20, ♀ 19-24 mm.

Wiedemann only described the male; the female is identical—ovipositor long, black.

*Philodicus umbripennis*, sp. n.

Type (male), type (female), from S.W. Nyasa (*R. Webb*), 96, 261; another male from Nyasaland, Nov. 1892 (*H. H. Johnston*), 94, 12; another female from Nyasaland (*Dr. H. G. Eldred*).

A reddish-black species, distinguished by the shading on apex of wings not being continued in streaks, but only present at apex, becoming paler on its posterior border. Legs blackish; femora and tibiæ partly red.

Length, ♂ 20, ♀ 20-22 mm.

*Male*.—*Face* covered with yellow tomentum. *Moustache* composed of yellow bristles, with five or six black ones on each side near oral opening. *Palpi* with long white hairs. *Antennæ* reddish, the third joint brown, the first two joints with black hairs. *Forehead* with yellow hairs, also present below antennæ, a few weak black bristles also present at sides of forehead. Hind part of head with some white bristles above the black ones. *Thorax* covered with pale tomentum, the median brown stripe divided in the middle; dorsum of thorax and scutellum covered with short black pubescence, the two bristles on the latter black. *Abdomen* with the usual spots, reddish brown in colour with broad grey segmentations; pubescence black, rather thick, and yellow on the pale parts; bristles at sides white. *Genitalia* reddish with black pubescence above and yellow below. *Legs* blackish, the outer sides of all femora and tibiæ red; tarsi reddish; pubescence on legs whitish, long underneath the fore femora and fore tibiæ; bristles chiefly black, some longer white ones on the fore legs. *Wings* clear; veins yellowish.

*Female* identical. *Genitalia* long, reddish brown. Hind femora with some white bristles, the fore femora with some weak, yellow, bristly hairs.

*Table for Species of Philodicus from the Oriental Region.*

1. Legs black and red .....	2.
Legs wholly black .....	8.
2. Very large species, tibiæ partly rufous, ovipositor with large side-spines ....	<i>grandissimus</i> , ♂ ♀, sp. n.
3. Fore femora armed with bristles below, Fore femora with no such bristles below.	4. 6.

4. Robust species. Anterior and middle femora and tibiae red below and on outside, posterior tibiae red on the outside . . . . . *javanus*, Wied.  
 Slender, small species . . . . . 5.
5. Femora and tibiae reddish below . . . . . *meridionalis*, ♂ ♀, sp. n.  
 Legs darker than in *meridionalis*, the red colour being very dull rufous . . . . . *fuscipes*, ♂ ♀, sp. n.
6. Transverse vein very near base of first submarginal cell, so that the second submarginal cell is nearly as long as the first one. Fore femora and tibiae partly red below, bristles on legs black and white . . . . . *hospes*, Wied.  
 Second submarginal cell the same length as is usual in this genus . . . . . 7.
7. Large robust species. Fore and middle tibiae almost wholly obscurely red, bristles all black . . . . . *thoracicus*, ♂ ♀, sp. n.
8. Fore femora armed with bristles below. Fore femora with no such bristles below. . . . . 9.
9. Large species, the bristles on fore femora below, stout, black. Moustache yellow. Smaller species, the bristles on fore femora below in male weak, white, in female stouter and black or white. Moustache white . . . . . *univentris*, ♂, Wlk.  
*femoralis*, ♂ ♀, sp. n.
10. Scutellum with no bristles . . . . . 11.  
 Scutellum with four or more bristles . . . . . 12.  
 Scutellum with the usual two bristles . . . . . 13.
11. Medium-sized black species with quite clear wings. Scutellum with thick white hairs . . . . . *pallidipennis*, ♂, sp. n.
12. Larger robust species. Moustache black and white. Scutellum with black hairs and a fringe of black bristles on the border . . . . . *chinensis*, Schiner.  
 Slighter species. Moustache white . . . . . *longipes*, Schiner.
13. Smaller species. Moustache black and white. Scutellum with black hairs and two black bristles on border. . . . . *ceylonicus*, Schiner.

*Promachus ceylonicus*, Macq. (see Ricardo, Ann. & Mag. Nat. Hist. (9) v. p. 213 (1920)), I have not been able to identify as a species of *Philodicus*.

*Asilus albispina*, Thomson, from the description, probably belongs to this genus, as the author says it is near *Asilus agnitus*, Wied., which is now said to be a synonym of *Philodicus javanus*. Thomson's type came from Manila.

*Promachus leucotrichodes*, Bigot, and *Promachus tristis*, Bigot, both from India, sound from the description as if they might belong to this genus, rather than to *Promachus*, but I have not been able to identify them from the descriptions. The former is described as having an ashy-

grey narrow and elongate abdomen, with two black spots on each segment. Legs black with black bristles, and the latter only differs in having white bristles on the legs; ovipositor in both with two spines at end.

*Philodicus grandissimus*, ♂ ♀, sp. n.

Types male and female from Disa, Bombay Presidency (Major G. C. Nurse).

One female from Tippanur, Kurinool District (T. V. R. Coll.), in I. E. E. Coll.

A very large species for this genus, but it appears in other respects a true *Philodicus*. The ovipositor has not a regular circlet of spines, the side-ones being much larger. Legs blackish, only the tibiæ dull rufous on the outer side.

Length, ♂ 32, ♀ 36 mm.

*Male*.—*Face* covered with greyish-white tomentum. *Palpi* black with white hairs. *Moustache* composed of pale yellowish, rather weak bristles with weak white hairs beyond, reaching the base of the antennæ, which are incomplete, the first joint black covered with grey tomentum, the second reddish, both with black hairs and bristles. *Forehead* same colour as face with white hairs, some rather bristly. *Hind part of head* with all bristles and hairs white. *Beard* white. *Thorax* with two well-marked brown stripes, narrow, on a blackish-coloured dorsum covered with grey and brown tomentum, side-stripes small; pubescence short, black, some white hairs on posterior part. *Scutellum* with two black bristles and white hairs. *Abdomen* the usual colouring, appearing blackish brown with grey segmentations; pubescence wholly white, bristles at sides white. *Genitalia* and the preceding segment black, shining, with white pubescence and hairs. *Legs* blackish, but covered with dense white pubescence; the femora below at extreme apices somewhat rufous like the tibiæ; fore femora below with weak white bristly hairs, all bristles black, except some on the coxæ. *Wings* tinged somewhat yellow, grey at apex; veins yellowish red.

*Female* identical. *Ovipositor* black, shining; the spines at sides very stout, one predominates in length, those at apex very short.

*Philodicus javanus*, Wied.

Zool. Mag. i. pp. 3, 4, 5 [*Asilus*] (1819), etc.

*Philodicus* ? *agnitus*, Wied. Zool. Mag. i. pp. 3, 35 [*Asilus*] (1819).

*Philodicus perplexus*, Wied. Ausszweifel. Ins. i. p. 495 [*Asilus*] (1828).

- Philodicus rubritarsatus*, Macq. Dipt. Exot. i. (2) p. 215 [*Trupanea*] (1838).  
*Philodicus gobares*, Wlk. List Dipt. ii. p. 420 [*Asilus*] (1838); et vii., Suppl. 3, p. 604 [*Trupanea*] (1855).  
*Philodicus telifer*, Wlk. Ins. Saund., Dipt. i. p. 115 [*Trupanea*] (1851); et List Dipt. vii., Suppl. 3, p. 606 [*Trupanea*] (1855).  
*Philodicus sagittifer*, Wlk. Ins. Saund., Dipt. i. p. 116 [*Trupanea*] (1851); et List Dipt. vii., Suppl. 3, p. 606 [*Trupanea*] (1855).  
*Philodicus innotabilis*, Wlk. List Dipt. vii., Suppl. 3, p. 604 [*Trupanea*] (1855).  
*Philodicus confinis*, Wlk. List Dipt. vii., Suppl. 3, p. 606 [*Trupanea*] (1855).  
*Philodicus melanurus*, Dol. Natur. Tyd. Nederland Ind. n. ser. vii. (x.) p. 408, pl. vi. fig. 2 [*Asilus*] (1856).  
*Philodicus inserens*, Wlk. Proc. Linn. Soc. London, i. p. 116 [*Trupanea*] (1857).

The type of *gobares* is a female from Silhet.

The type of *telifer* is a female from East India.

The type of *sagittifer* is a female with another male and female from East India (Walker Coll.).

The type of *innotabilis* is a female with two males and one female from Java and Sumatra.

The type of *confinis* is a male from Java.

The types of *inserens* are male and female from Sarawak; these are rather small, only measuring 18 mm., whereas the usual length is 20–22 mm., though v. d. Wulp mentions some he had from Java as only 14 mm. long.

The species described by Macquart as *Trupanea fuscus*, Dipt. Exot. i. p. 220, from Bengal, is very probably another synonym of this species, but the description is too meagre to identify the type without seeing it. Schiner records it from Batavia in Novara Reise, Dipt. p. 178.

Besides the Walker types there are specimens in the Brit. Mus. Coll. from Java, Johore, Khasi Hills, Assam, and Kungra Valley, N. India. In the Imms Coll. are specimens from Kumaon, N. India.

This species is said by v. d. Wulp to be common in the East Indies, and evidently has a wide range; it has already been recorded from Java, Sumatra, and Borneo, and appears to reach India and Assam.

A robust species; the moustache not black, as stated by Wiedemann, but yellow with a few black bristles near the oral opening, as stated by v. d. Wulp.

*Legs* black; the anterior legs with the femora and tibiæ reddish below and on the outside; the posterior tibiæ red on the upperside; the bristles chiefly black, a few white ones occasionally, usually one long one on the fore tibiæ on outside; fore femora below with three or more black bristles

and yellowish-white hairs; in the female the bristles are often yellow. *Wings* tinged yellow; apex and posterior border greyish. *Ovipositor* short, black. *Abdomen* with white bristles at sides.

Length 20-22 mm.

A small blackish species; the second submarginal cell nearly as long as the first, but distinctly shorter. *Moustache* white, some black bristles near oral opening. *Abdomen* with the usual dark spots and grey segmentations. *Legs* blackish, thickly covered with white pubescence; fore femora below at apices and fore tibiæ below at base reddish; fore femora unarmed, with long white hairs below, fore tibiæ with golden-yellow appressed pubescence below; hind femora at base with some yellow bristles, also the coxæ; on the fore tarsi appear a few white bristles in some specimens, and on the fore tibiæ, otherwise the bristles are black.

Length 19 mm., as given by Wiedemann.

*Philodicus meridionalis*, ♂ ♀, sp. n.

This and the following species are both very nearly allied to *Philodicus hospes*, but differ by the second submarginal cell being shorter, the transverse vein being about the usual distance from the base in this genus. All the three species are small, with abdomen blackish with grey segmentations. This species has black legs, the femora and tibiæ reddish below; the bristles on the legs black and white; the fore femora with two black at the most below in the male with soft white hairs; the female has black and yellow bristles. *Moustache* yellow.

Length, ♂ 12-15, ♀ 18 mm.

Types male and female and others all from Ceylon (Yerbury Coll.).

In I. E. E. Coll. are males and females from Pattikonda, Kurinool District (J. V. R. Coll.); from Marugmala (C. N. Coll.); from Coimbatore (A. G. R. Coll., G. N. Coll.); Becravalli Bellary District (C. N. Coll.) and Palur Farm, S. Arcot District (P. S. Coll.), in South India.

*Philodicus fuscipes*, ♂ ♀, sp. n.

Types (male and female) and others from Biserat, Bidor, Putani Cape, Siam (*Robinson and Annandale*).

Length, ♂ 16, ♀ 16-18 mm.

A species very nearly allied to the above species from Ceylon, *P. meridionalis*.

Moustache yellow with two or more black bristles near the oral opening.

Legs darker than in *Philodicus meridionalis*, sp. n., the femora and tibiæ being very dull rufous below and on the outside. In the male the bristles are chiefly black; in the female black and white, the hind femora with white ones; there are long yellow bristles on the outer side of fore tibiæ in both sexes. Fore femora on underside in the male with yellow and black bristles, in the female with three white bristles.

*Philodicus hospes*, Wied.

Zool. Mag. i. pp. 3, 32, 47 [*Asilus*] (1819); Dipt. Exot. p. 207, 44 [*Asilus*] (1821); et Ausszweifel. Ins. i. p. 495 [*Asilus*] (1828); Schiner, Verh. zool-bot. Ges. Wien, xvi. p. 689 (1866); Röder, Ent. Nachricht. xix. p. 235 (1893).

This species has been placed in the genus *Alcimus*, and so appears in Kertesz's Cat., doubtless owing to the remark by Wiedemann that the transverse vein is very near the base of the first submarginal cell, which is true; but it is hardly as close as in species of *Alcimus*, and the species has all the appearance and characters of the genus *Philodicus*, to which it certainly belongs, though Schiner states that one female he saw in the Winthem Coll. belongs to the genus *Alcimus*. The specimens in the Brit. Mus. Coll. from Ceylon answer to Wiedemann's description, his specimens came from Tranquebar, and Röder records it from Ceylon. The genus *Alcimus* is, therefore, practically confined to the African Region.

In the Brit. Mus. Coll. are males and females from Trincomalee and Mahaganay, Ceylon (Yerbury Coll.).

*Philodicus thoracicus*, ♂ ♀, sp. n.

Types (male and female *in cop.*) from Trincomalee, Ceylon, and other males and females (Yerbury Coll.).

A medium-sized species distinguished by the broad median stripe not divided in the middle. Legs blackish; tibiæ rufous, the hind pair darker. Moustache white.

Length, ♂ 27, ♀ 28 mm.

*Male*.—*Face* covered with greyish-white tomentum, silvery at the sides. *Palpi* with white hairs. *Moustache* composed of yellowish-white bristles with two or more black ones near the oral opening; the hairs above are white, reaching the base of antennæ, ranged on the sides chiefly. *Antennæ*

blackish, the second joint reddish, the first two joints with black bristles, the arista long. Hind part of head with black bristles, and a few weak white hairs below; white bristles appear beyond the vertex. Beard white. *Thorax* brownish with yellowish tomentum, the side-stripes small; pubescence on dorsum black, the hairs posteriorly chiefly black. *Scutellum* with two black bristles. *Abdomen* with the usual spots and grey segmentations appearing brownish; pubescence black on the brown spots and whitish on the segmentations; bristles at sides black with yellow ones below. *Genitalia* short, reddish brown, with black hairs and some whitish ones at apex; below appear long black hairs on the small red-brown segment preceding the genitalia. *Legs* blackish; the fore and middle tibiae almost wholly rufous-coloured, the extreme apex of femora below reddish; fore femora practically unarmed, with soft white hairs; pubescence on legs dense, white, all bristles black. *Wings* clear with grey apex and posterior border; veins reddish yellow.

*Female* identical, the fore femora armed below with short black bristles; bristles at sides of abdomen apparently all yellow. *Ovipositor* black.

*Philodicus univentris*, ♂, Walker.

Ins. Saund., Dipt. i. p. 114 [*Trupanea*] (1851); et List Dipt. vii., Suppl. 3, p. 602 [*Trupanea*] (1855).

Type (male) from India (Walker Coll.).

A large robust species in very bad preservation. Legs black with greyish-yellow tomentum; fore femora armed with stout black bristles; all bristles on legs are black, those on the abdomen chiefly white. Moustache yellow.

Length 21 mm.

*Philodicus femoralis*, ♂ ♀, sp. n.

Type (male) from Okkyl, Schwegu, Burmah (C. F. C. Beeson).

Type (female) and another from Magaung, Myitkyina District, Upper Burmah (Capt. Whitmore, I.M.S.). Males and females from Dehra Dun and N. Toungoo, Burmah.

Length, ♂ 17-18, ♀ 19-23 mm.

A species distinguished from *Philodicus ceylonicus* by the white moustache with only two or three black bristles near the oral opening and by the presence of some white



bristles on the legs; the fore femora have three or four very weak white ones below intermixed with long white hairs, and the hind femora have a few short white ones below; also sometimes some are present in the middle tibiae. Scutellum with two black bristles.

*Female* identical; fore femora with the bristles below much stouter and black or white, and this applies to the other femora.

*Philodicus pallidipennis*, ♂, sp. n.

Type (male) and another from Manora, Karachi (*F. W. Townsend*).

A small blackish species distinguished by the absence of the grey shading in apex of wing. Legs entirely black; bristles chiefly white. Scutellum with no black bristles.

Length 19 mm.

*Face* with grey-white tomentum. *Palpi* with long white hairs. *Moustache* composed of yellowish-white long hairs, not very bristly; the sides of face as far as antennae with similar hairs also present in the centre. *Antennae* blackish, the first two joints with whitish bristles, the third joint short and oval, the arista quite as long as the antennae themselves. *Forehead* with similar hairs to those on the face. Hind part of head with white bristles. *Thorax* brownish with grey tomentum, the black median stripe divided; pubescence on dorsum white. *Scutellum* with thick long white hairs on dorsum and ranged along the whole posterior border, where no black bristles are present. *Abdomen* short, olive-brown, the usual spots not very distinct; pubescence short, white, thick, sides with some long yellowish hairs on basal segments and long yellow bristles above. *Genitalia* short, rather stout, black, with black pubescence and some yellow hairs at apex; three reddish cylindrical pieces proceed from below and curl over top of genitalia. *Wings* clear; the type has one grey streak in the first submarginal cell, the other male has a wholly clear wing.

This species may possibly require a genus to itself; the scutellum with hairs only and the wing clear differentiate it from others of the genus. Females may assist to assign it a proper place.

*Philodicus chinensis*, Schiner.

Novara Reise, Dipt. p. 179 (1868); v. d. Wulp, Tijds. v. Ent. xli. p. 134 (1898).

[*Trupanea separatus*, Wlk. List Dipt. vii., Suppl. 3, p. 611 (1855).]

Schiner described the species from Hongkong.

Type (female) of *separatus* was described by the author as from an unknown locality.

Males and females from Trincomalee, Ceylon (*Yerbury*). Male from Batu Pahat, near Johore (*H. N. Ridley*). Male from Dinding, Siam. Female from Toungoo, Burmah, in Forest Research Zool. Coll. Male from China (*J. J. Walker*).

The species has been recorded from Singapore.

A medium-sized robust species with black legs. Scutellum covered with black hairs and with a fringe of black bristles on the border, four in number at least, not common in this genus. Fore femora unarmed. Moustache black and white.

Schiner gives the length as 12·13 mm.; these are from 16–18 mm.

*Philodicus longipes*, Schiner.

Novara Reise, Dipt. p. 179 (1868); Ost.-Sack. B. Ent. Zeit. xxvi. p. 112 (1882).

One male from Albay, S.E. Luzon (*Whitehead Expedition*); one male from Los Banos, male and female from Cape Engano, N. Luzon (*J. Whitehead*); two females from Isabella, N. Luzon: all localities in Philippine Islands.

This species appears to be distinguished from *Philodicus chinensis*, Schiner, by its slighter narrower build. Moustache usually white. Schiner says the scutellum has two black bristles, and gives the length as 10 mm.; but these species are larger.

Bezzi (in 'Studies in Philippine Diptera,' i. p. 14, 1913) says it is an endemic species, and suggests *Erax integer*, Macq., from Manila, is the same.

*Philodicus ceylonicus*, Schiner.

Novara Reise, Dipt. p. 179 (1868).

Males and females from Trincomalee, Colombo, Kanthalia, and Kandy, in Ceylon (*Yerbury*).

Distinguished from *Philodicus chinensis* by having only two black bristles on the scutellum, and is usually smaller in size. Schiner gives 11 mm.; these range from 11–15 mm.

It seems very closely allied to the above species from the Philippines.

[To be continued.]